NESTING COMMON LOON
MONITORING SURVEY
FUNDY NATIONAL PARK

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ABSTRACT

A loon nest re-establishment program was initiated in Fundy National Park in the spring of 1990. Common Loons (Gavia Immer) were monitored on Wolfe, Bennett and Tracey Lakes. On July 5th a nest was found on Wolfe Lake and on July 6th one chick was hatched.

INTRODUCTION

Commencing on June 11, Common Loons (Gavia Immer) were monitored at Wolfe, Bennett and Tracey Lakes for the remainder of the spring and throughout the summer. The purpose of this project was to re-establish loon nesting sites within the Park.

Loons are indicators of the quality of wilderness country (McIntyre 1986), therefore, by monitoring them would indicate whether a healthy or unhealthy environment exists. Loons are at the top of their freshwater food chain for six to seven months each year (McIntyre 1986); so therefore reflect the water quality and condition. Loons are much less predominantly found now than they were in the past. The main contributor to the decline of the loon is man himself. In recent years, declines in loon productivity have been linked to increased lake shore development, increased acidity of lakes, and manipulation of water levels. With the increase in waterfront development, there also is an increase in predators, such as raccoons, which threaten the loons nesting success.

For the second year in a row at Fundy National Park, a breeding pair of loons were observed on Wolfe Lake to observe the breeding pair of loons, and monitoring at Bennett and Tracey Lakes to observe loon activity for breeding and feeding, etc.

STUDY AREAS

There were three lakes monitored in Fundy National Park this year for loons. They are Wolfe, Bennett and Tracey Lakes (Appendix I).

Wolfe Lake is located at the northwest corner of Fundy National Park off Highway 114. It has latitude and longitude coordinates of 45° 39′ and 65° 08′. The lake measures 1070 m by 370 m and has an area of 22 ha. It has a maximum depth of 9.1 m and a mean depth of 3.83 m.

The nest site was situated at the southern end of a narrow island on the lake's western side. There were four observation sites used. The two main ones were on the western side of the lake, while the other two were located on the lake's north and east sides (Appendix II).

Bennett Lake is located approximately 12 km from the Headquarters area to the northwest off Highway 114. It's coordinates are 45° 38′ latitude and 65° 05′ longitude. The lake measures 1460 m by 390 m and has an area of 31 ha. It's maximum depth is 11.1 m, and its mean depth is 2.26 m.

There was only one observation point used at this lake. It was located at the end of a strip of land near the beach area of the lake (Appendix III).

The third lake, Tracey, is located approximately 2 km in from the Old Shepody Road on the north boundary of the Park. It's coordinates are 45° 39′ latitude, and 65° 04′ longitude. The lake has an area of 8.19 ha and measures 700 m by 220 m. The maximum depth is 2.2 m and its mean depth is 0.91 m.

Only one observation point was used on this lake. It was located in the open area at the northern end of the lake (Appendix IV).

METHODS

From June 11 to August 31, the loons were observed using 10 x 40 Bausch & Lomb binoculars and a 20 x 45 Bushnell Spacemaster spotting scope. A canoe was also utilised on Wolfe Lake for making observations.

Monitoring was carried out four to six times per week with an average observation length of sixty minutes. Any observations, such as loon behaviour, weather conditions, and human activities (i.e. boating, swimming) were recorded in a notebook.

RESULTS

This year a pair of loons successfully nested and raised one chick on Wolfe Lake. This is the second year in a row that a pair of loons have been successful in raising young, although 1989 had two successful chicks compared to this year, which only had one.

On Tracey Lake, the artificial nesting platform (Appendix V) which was implemented, proved to be unsuccessful as no loons were observed to be nesting on the lake.

Bennett Lake, which was the largest of all three lakes, also proved to be unsuccessful, since no paired loons were successful in establishing a nest on the lake.

DISCUSSION

There are three lakes within the Park that are able to support a pair of nesting loons. The lakes are Wolfe, Bennett and Tracey.

Wolfe Lake was the most active lake over the summer with one successfully established nesting pair of loons. The beginning of the incubation period for the pair of loons is unknown, but the period usually lasts twenty-eight to twenty-nine days (Joan Dunning 1985). During these four weeks of incubation prior to hatching only one loon was usually observed on the lake, therefore, one loon or the other remained on the nest for most of the period. Since the nest site was not found until the day before hatching, it can be reasoned that the loons remained well hidden and inconspicuous while on the nest.

On July 6th, one chick was hatched to the pair of loons on Wolfe Lake. Although the normal number of eggs usually raised by a pair of loons is two, there was only enough shell fragments found in the nest for one egg, indicating that only one egg was laid. During the chick's fledgeling phase, the main areas used for a nursery were the southwestern corner of the lake and in an inlet approximately six hundred meters down the eastern side of the lake (Appendix II).

Bennett Lake is the largest of the three lakes and would have the better potential to support a pair of nesting loons merely because of its size. Only one unpaired loon was occasionally observed on the lake. There are many excellent nesting sites along the shore and on two of the three islands of the lake. Most of these potential nest sites are reduced because of high use of the lake by human activities, such as boating and fishing. There is still a good chance that a pair would be able to use the lake, since they can tolerate some human presence. This lake should be

monitored closely to determine if a pair may attempt to use the lake and steps can be taken to ensure minimal disturbance during nesting such as constructing an artificial nesting platform or roping off an area.

Tracey Lake is the smallest of the three lakes. This year an artificial nesting platform was constructed but no loons successfully nested on the lake. Although no nesting pair was observed on the lake, one unpaired loon was occasionally seen there. Even though this lake is relatively small for a pair of loons, it has little or no human disturbance and has good water quality with a brook trout population comparable to Wolfe Lake (Hoar, 1981), which makes it a good nesting site. With the establishment of the floating nest, which rises and falls with the fluctuating water levels, the loons will be able to return to a relatively good nesting habitat year after year.

CONCLUSION

Common Loons have been observed many times feeding on lakes in Fundy National Park, but have not been successful in establishing a nest and raising young until 1989, and again in 1990. The Common Loon is recognized as a significant and representative species of the Maritime Acadian Highlands in the approved Park Conservation Plan. It proposes an investigation to identify loon nesting habitat, methods to increase productivity and reasons for reproductive failure.

To further fulfil the role of Fundy National Park as a wildlife refuge, measures must be taken to establish additional nesting pairs and to encourage the return of successful breeding pairs. A public education program could be initiated to raise public awareness for the plight of this representative species. This could be achieved through cooperation between Resource Conservation and Interpretation Sections and the Fundy Guild Inc.

Although Wolfe Lake supported a successful breeding pair of loons for the second year in a row, Bennett and Tracey Lakes also have the potential for supporting a pair. Bennett Lake, the largest in the Park (31 ha), has good water quality and good brook trout populations (Hoar, 1981). Even though it does have a fair amount of disturbance in the form of human activity, measures could be taken to section off a part of the lake and installing an artificial nesting platform. Tracey Lake is relatively small (8.19 ha), but could support a pair of loons because it has good water quality supporting a brook trout population comparable to Wolfe Lake (Hoar, 1981). Although the artificial nesting platform which was implemented this year failed, it should be continued again to help encourage another nesting pair to the Park.

REFERENCES

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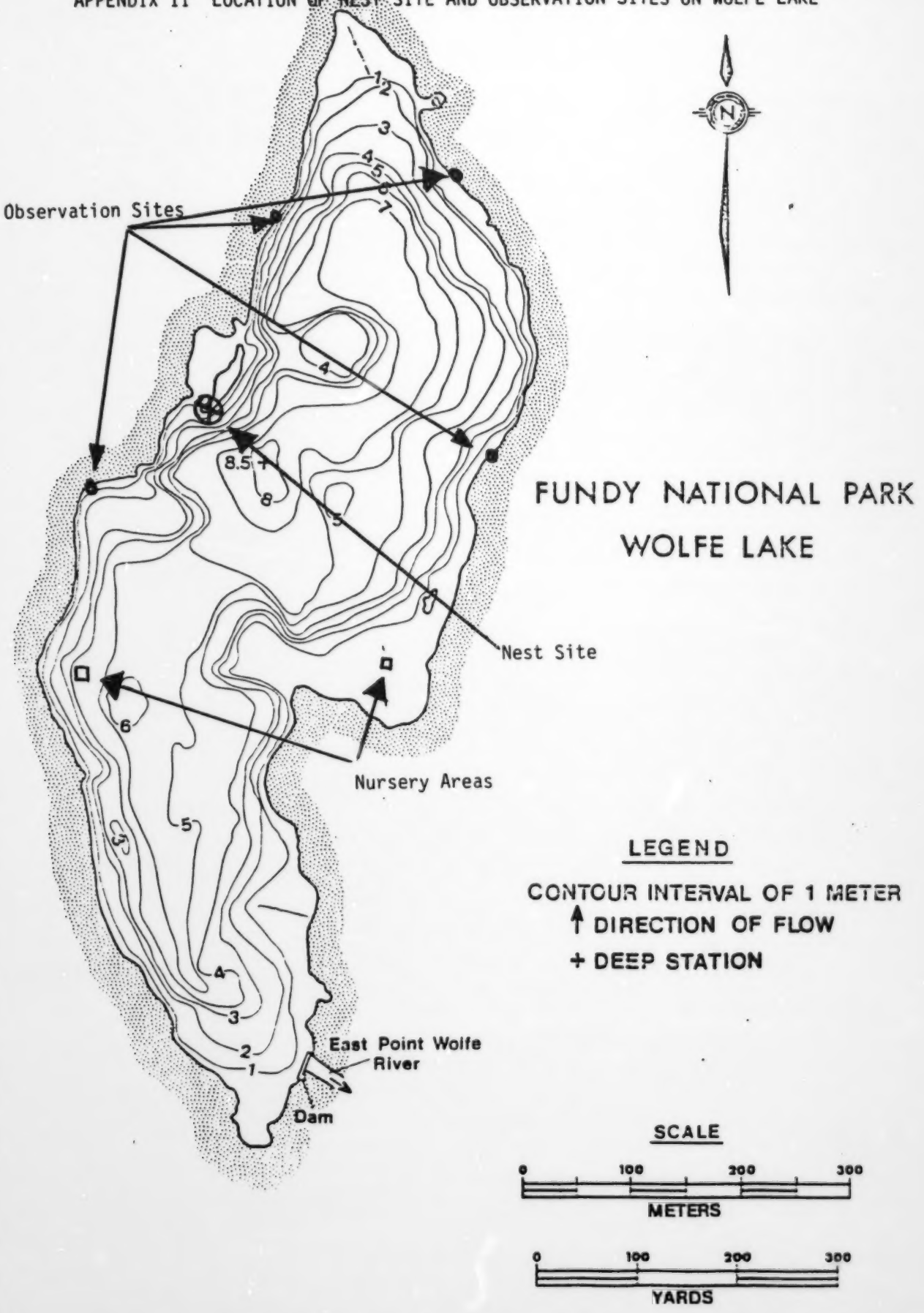
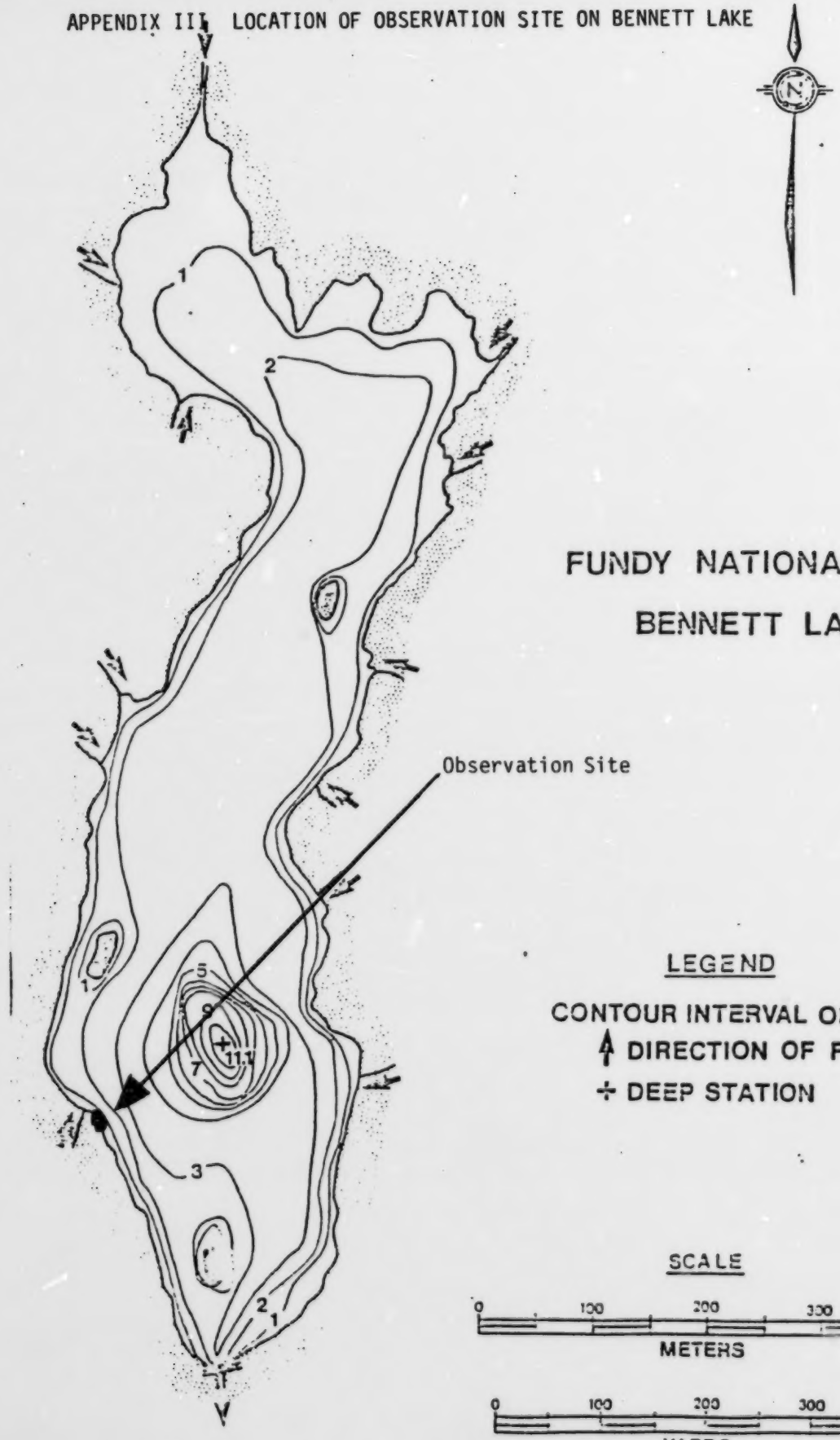
APPENDICES

APPENDIX I LOCATIONS OF WOLFE, BENNETT AND TRACEY LAKES IN FUNDY NATIONAL PARK

APPENDIX II LOCATION OF NEST SITE AND OBSERVATION SITES ON WOLFE LAKE



APPENDIX III LOCATION OF OBSERVATION SITE ON BENNETT LAKE



FUNDY NATIONAL PARK

BENNETT LAKE

LEGEND

CONTOUR INTERVAL OF 1 METER

DIRECTION OF FLOW

DEEP STATION

SCALE

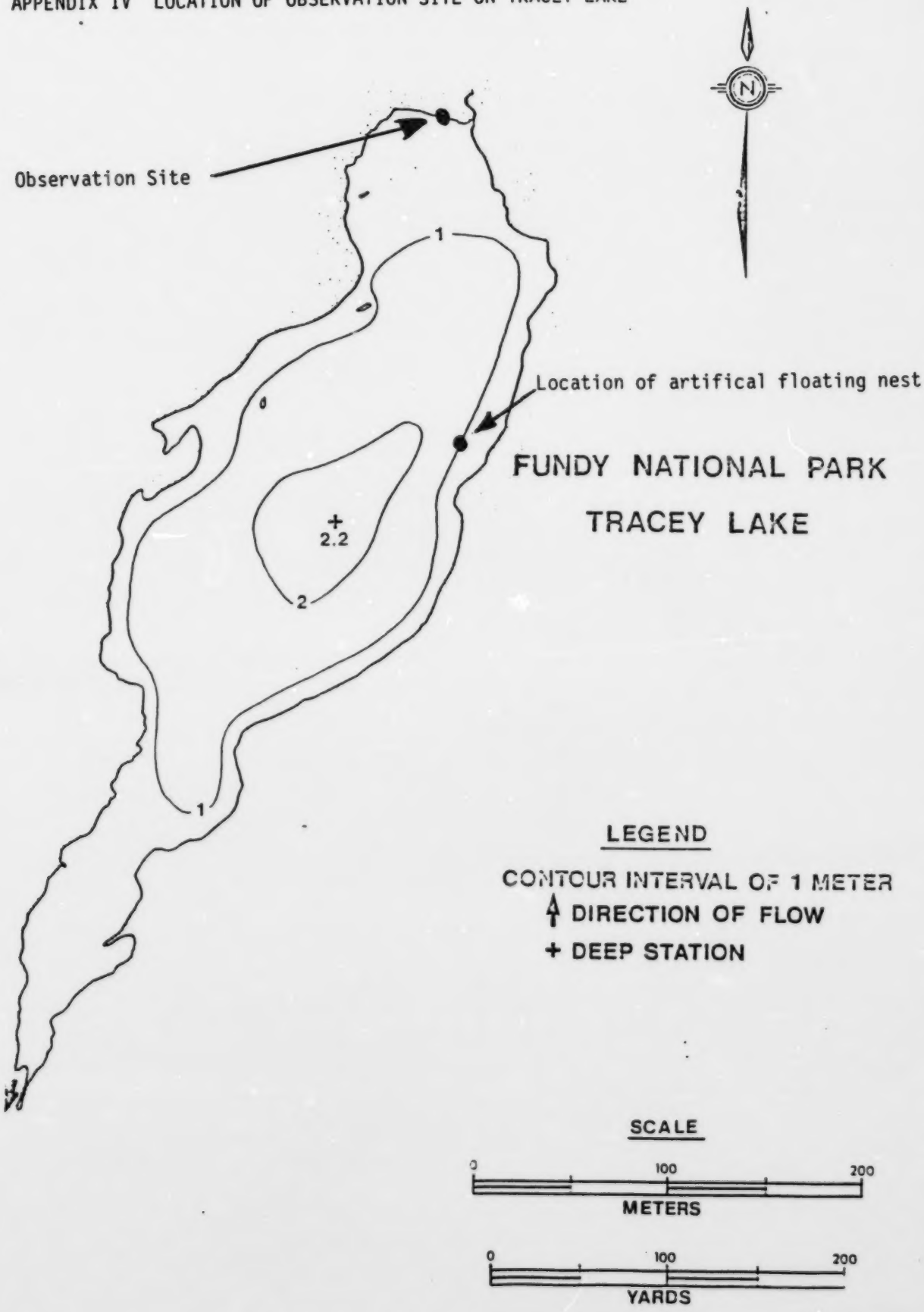
0 100 200 300 400

METERS

0 100 200 300 400

YARDS

APPENDIX IV LOCATION OF OBSERVATION SITE ON TRACEY LAKE



APPENDIX V DIAGRAM OF ARTIFICAL NESTING PLATFORM